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| 10/821,687 | 04/09/2004 | F. Soner Terek | MSFT-2955/307064.01 | 1355 |
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| WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) ONE LIBERTY PLACE - 46TH FLOOR PHILADELPHIA, PA 19103 | | | | |
| | | | EXAMINER LIANG, GWEN | |
| | | | ART UNIT 2162 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/821,687 | Applicant(s) TEREK ET AL. | |
| | Examiner GWEN LIANG | Art Unit 2162 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications through the applicant's amendment, filed on 10/03/2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 38-39, 44-48, 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennion (U.S. Patent No. 5,634,123).

With respect to claim 38, Bennion teaches a computer readable medium comprising:

at least one binary fragment comprising a binary fragment header and a binary fragment payload (col. 1, lines 56-60, "The data structure defined by the present invention includes two types of records: data-containing records and container records. Data-containing records contain data, while container records contain other records. A code point found at the beginning of each record specifies its type", wherein a code point is equivalent to a header and one of the types is data-containing records, in which case the header is a binary fragment header; Figure 2, element 205, wherein the Data portion is equivalent to the payload);

wherein the binary fragment header comprises a type field wherein the type field indicates the fragment is a binary fragment (col. 1, lines 56-60, "The data structure defined by the present invention includes two types of records: data-containing records and container records. Data-containing records contain data, while container records contain other records. A code point found at the beginning of each record specifies its type.", wherein the data-containing record type is equivalent to a binary fragment type);

and a length field wherein the length field indicates a length of the binary fragment payload (Figure 2.; col. 1, lines 60-62, "A length field facilitates variable data lengths for data-containing records");

wherein the payload comprises a plurality of primitive data members in storage engine record format; (col. 3, lines 19-24, "Thus, a hierarchical structure emerges. Each individual record contained within COMPANY record 600 may be classified as either a container record or a data-containing record. Container records contain other records, while data-containing records contain data. No record is both a container record and a data-containing record"; col. 4, lines 40-43, "By definition, a data-containing record has a "Length" equal to the actual length of the record itself, since a data-containing record cannot contain another record", wherein a data-containing record is a primitive data member)

Bennion does not explicitly teach a payload wherein said plurality of primitive data members are all of the primitive data members of the object. However since each record within the COMPANY object may be classified as either a container record or a data-containing record (i.e. a primitive data member) (col. 3, lines 19-22), it is obvious

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that said plurality of primitive data members are all of the primitive data members of the object.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include all of the primitive data members of an object in a binary fragment payload as taught by Bennion to provide a complete COMPANY object record as shown in the example given in col. 3 lines 19-31. One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

Claim 39 is rejected for the reasons set forth hereinabove for claim 38 and furthermore Bennion discloses a medium wherein the type field indicates that the binary fragment is the only fragment of the object (col. 1, lines 59-60; col. 3, lines 23-24).

Claim 44 is rejected for the reasons set forth hereinabove for claim 38 and furthermore Bennion discloses a medium comprising a terminator fragment that marks the end of the object, said terminator fragment comprising a terminator type field indicating the terminator fragment is a terminator fragment (col. 6, lines 40-42).

Claim 45 is rejected for the reasons set forth hereinabove for claim 38 and furthermore Bennion discloses a medium comprising:

a collection start fragment comprising a collection start header (col. 1, lines 56-60, "The data structure defined by the present invention includes two types of records: data-containing records and container records. Data-containing records contain data,

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while container records contain other records. A code point found at the beginning of each record specifies its type", wherein container records are equivalent to "collection".

A code point is equivalent to the start header);

wherein the collection start header comprises a collection start type field, wherein the collection start type field indicates the collection start fragment is a collection start fragment (col. 1, lines 56 - 63, "The data structure defined by the present invention includes two types of records: data-containing records and container records. Data-containing records contain data, while container records contain other records. A code point found at the beginning of each record specifies its type. A length field facilitates variable data lengths for data-containing records, as well as implicit definition of a hierarchical structure among records", wherein container records are equivalent to "collection". A code point is equivalent to the start header. "a hierarchical structure among records" indicates the structure of a collection type record; col. 5, lines 18-20, "One bit is used to indicate that this is a container record (as opposed to a data-containing record)");

and a bit field, wherein the bit field indicates whether a plurality of collection element fragments are ordered or unordered (col. 1, lines 63-65, "A format field facilitates movement of data among environments having differing data formats."; col. 5, lines 34-39, "Format 204 is a one-byte field that specifies an attribute type that is used by the application program 106 in interpreting the stored data. Thus, the system provides for automated translation of individual records from one data format to another", wherein it is obvious that the format field provides attribute information

including attribute ordering information in order to facilitate automated translation of individual records from one data format to another)

Claim 46 is rejected for the reasons set forth hereinabove for claim 45 and furthermore Bennion discloses a medium comprising:

at least one collection element fragment comprising a collection element header and collection element payload (col. 1, lines 56-60, "The data structure defined by the present invention includes two types of records: data-containing records and container records. Data-containing records contain data, while container records contain other records. A code point found at the beginning of each record specifies its type"; col. 5, lines 18-20, "One bit is used to indicate that this is a container record (as opposed to a data-containing record)", wherein a code point is equivalent to a header and one of the types is container records, in which case the header is a collection element header because container records contain other records, which is equivalent to a "collection" element, and the data itself is the payload);

wherein the collection element header comprises a collection element type field, wherein the collection element type field indicates the collection element fragment is a collection element fragment; (col. 5, lines 18-20, "One bit is used to indicate that this is a container record (as opposed to a data-containing record)",

and a collection element length field, wherein the collection element length field indicates the a length of the collection element payload (col. 5, lines 23-25, "For container records, the length field 203 specifies the total length of all records that the current record contains (as described above)");

Claim 47 is rejected for the reasons set forth hereinabove for claim 46, and furthermore Bennion discloses a medium wherein the collection element payload comprises a data member in a collection of data members corresponding to said collection start fragment (col. 3, lines 32-43).

Claim 48 is rejected for the reasons set forth hereinabove for claim 46, and furthermore Bennion discloses a medium wherein

the collection element header further comprises a collection element locator field that provides a unique location of a data member in a collection of data members (col. 4, lines 24-31).

Claim 55 is rejected on grounds corresponding to the reasons given above for claims 45 and 46.

Claims 56, 57 are rejected on grounds corresponding to the reasons given above for claims 47 and 48.

4. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennion (U.S. Patent No. 5,634,123), further in view of Krishnaprasad et al, "Krishnaprasad" (U.S. Publication No. 2004/0220946), and further in view of Sarkar (U.S. Patent No. 6,012,067),

Claim 40 is rejected for the reasons set forth hereinabove for claim 38. However Bennion does not explicitly disclose a medium comprising Large Object (LOB) fragment.

Krishnaprasad discloses a computer readable medium comprising:

at least one Large Object (LOB) fragment comprising a LOB fragment header (page 5, section [0062], "Message 300 includes four fields: a length field 302; a version field 304; a flag field 306; and a payload field 310. The combination of fields 302, 304, 306, 310 composes a serialized image of XML data, according to the illustrated embodiment", wherein the fields except the payload field are considered to be the header portion) and a LOB fragment payload (page 6, section [0066], "Payload field 310 includes serialized XML data for a particular XML construct");

wherein the LOB header comprises a LOB type field, wherein the LOB type field indicates the LOB fragment is a LOB fragment (page 6, section [0066], "If the flag field 306 indicates that the type is LOB, then a locator for the LOB appears in the payload, such as the octal string "0.times.000030303030303- 0 . . . ");

and a LOB length field, wherein the LOB length field indicates the a length of the LOB fragment payload (page 5, section [0063], "Length field 302 includes data that indicates the length of the serialized image. Any method known in the art for indicating length may be used."; Page 6, TABLE 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a LOB fragment structure as disclosed by Krishnaprasad into the computer readable representation as disclosed in Bennion so that an XML element may be transferred between processes 132a and 132b, which both have access to LOB 144b, by passing the LOB locator (page 4, section [0047]). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

However the combination of Bennion and Krishnaprasad does not explicitly disclose a value type field that indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location.

Sarkar teaches a value type field, wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location (col. 4, lines 25-33, "Internal LOB columns contain LOB locators that can refer to out-of-line or inline LOB values. Selecting a LOB column value returns the LOB locator and not the entire LOB value. Different operations in the form of packages and functions are performed through these locators. Multiple LOB data type columns can be defined in a table and all possible SQL operations are possible over such tables and attributes. LOB locator can be stored in the table column, either with or without the actual LOB value").

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a value type field as disclosed by Sarkar into the computer readable representation as disclosed in the combination of Bennion and Krishnaprasad so that when a LOB column value is selected, the LOB locator is first returned instead of the entire LOB value (col. 4, lines 27-28). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

Claim 41 is rejected for the reasons set forth hereinabove for claim 40 and furthermore Sarkar discloses a medium wherein the LOB fragment payload comprises a LOB (col. 4, lines 25-33).

Claim 42 is rejected for the reasons set forth hereinabove for claim 40 and furthermore Sarkar discloses a medium wherein the LOB fragment payload comprises a pointer to a LOB location (col. 4, lines 25-33).

Claim 43 is rejected for the reasons set forth hereinabove for claim 40 and furthermore Sarkar discloses a medium wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB, a pointer to a LOB location, or a cell reference (col. 4, lines 25-33; col. 5, lines 18-47).

5. Claims 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnaprasad et al, "Krishnaprasad" (U.S. Publication No. 2004/0220946), further in view of Sarkar (U.S. Patent No. 6,012,067).

With respect to claim 49, Krishnaprasad discloses a computer readable medium comprising:

at least one Large Object (LOB) fragment comprising a LOB fragment header (page 5, section [0062], "Message 300 includes four fields: a length field 302; a version field 304; a flag field 306; and a payload field 310. The combination of fields 302, 304, 306, 310 composes a serialized image of XML data, according to the illustrated embodiment", wherein the fields except the payload field are considered to be the header portion) and a LOB fragment payload (page 6, section [0066], "Payload field 310 includes serialized XML data for a particular XML construct");

wherein the LOB header comprises a LOB type field, wherein the LOB type field indicates the LOB fragment is a LOB fragment (page 6, section [0066], "If the flag field 306 indicates that the type is LOB, then a locator for the LOB appears in the payload, such as the octal string "0.times.000030303030303- 0 . . . ");

and a LOB length field, wherein the LOB length field indicates the a length of the LOB fragment payload (page 5, section [0063], "Length field 302 includes data that indicates the length of the serialized image. Any method known in the art for indicating length may be used."; Page 6, TABLE 2).

However Krishnaprasad does not explicitly disclose a value type field that indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location.

Sarkar teaches a value type field, wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location (col. 4, lines 25-33, "Internal LOB columns contain LOB locators that can refer to out-of-line or inline LOB values. Selecting a LOB column value returns the LOB locator and not the entire LOB value. Different operations in the form of packages and functions are performed through these locators. Multiple LOB data type columns can be defined in a table and all possible SQL operations are possible over such tables and attributes. LOB locator can be stored in the table column, either with or without the actual LOB value").

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a value type field as disclosed by Sarkar into the computer readable representation as disclosed in the combination of Bennion and

Krishnaprasad so that when a LOB column value is selected, the LOB locator is first returned instead of the entire LOB value (col. 4, lines 27-28). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

Claim 50 is rejected for the reasons set forth hereinabove for claim 49 and furthermore Sarkar discloses a medium wherein the LOB fragment payload comprises a LOB (col. 4, lines 25-33).

Claim 51 is rejected for the reasons set forth hereinabove for claim 49 and furthermore Sarkar discloses a medium wherein the LOB fragment payload comprises a pointer to a LOB location (col. 4, lines 25-33).

Claim 52 is rejected for the reasons set forth hereinabove for claim 49 and furthermore Sarkar discloses a medium wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB, a pointer to a LOB location, or a cell reference (col. 4, lines 25-33; col. 5, lines 18-47).

6. Claims 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnaprasad et al, "Krishnaprasad" (U.S. Publication No. 2004/0220946), further in view of Sarkar (U.S. Patent No. 6,012,067), and further in view of Bennion (U.S. Patent No. 5,634,123).

Claim 53 is rejected for the reasons set forth hereinabove for claim 49. However the combination of Krishnaprasad and Sarkar does not explicitly disclose a collection fragment structure.

Bennion discloses a medium comprising:

a collection start fragment comprising a collection start header (col. 1, lines 56-60, "The data structure defined by the present invention includes two types of records: data-containing records and container records. Data-containing records contain data, while container records contain other records. A code point found at the beginning of each record specifies its type", wherein container records are equivalent to "collection". A code point is equivalent to the start header);

wherein the collection start header comprises a collection start type field, wherein the collection start type field indicates the collection start fragment is a collection start fragment (col. 1, lines 56 - 63, "The data structure defined by the present invention includes two types of records: data-containing records and container records. Data-containing records contain data, while container records contain other records. A code point found at the beginning of each record specifies its type. A length field facilitates variable data lengths for data-containing records, as well as implicit definition of a hierarchical structure among records", wherein container records are equivalent to "collection". A code point is equivalent to the start header. "a hierarchical structure among records" indicates the structure of a collection type record; col. 5, lines 18-20, "One bit is used to indicate that this is a container record (as opposed to a data-containing record)");

and a bit field, wherein the bit field indicates whether a plurality of collection element fragments are ordered or unordered (col. 1, lines 63-65, "A format field facilitates movement of data among environments having differing data formats."; col. 5, lines 34-39, "Format 204 is a one-byte field that specifies an attribute type that is used by the application program 106 in interpreting the stored data. Thus, the system provides for automated translation of individual records from one data format to another", wherein it is obvious that the format field provides attribute information including attribute ordering information in order to facilitate automated translation of individual records from one data format to another).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a collection fragment structure as disclosed by Bennion into the computer readable representation as disclosed in the combination of Krishnaprasad and Sarkar, allowing storage and manipulation of data using hierarchical nested records and code points (col. 1, lines 7-9). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

Claim 54 is rejected for the reasons set forth hereinabove for claim 53 and furthermore Bennion discloses a medium comprising:

a collection element fragment comprising a collection element header and collection element payload (col. 1, lines 56-60, "The data structure defined by the present invention includes two types of records: data-containing records and container records. Data-containing records contain data, while container records contain other

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records. A code point found at the beginning of each record specifies its type"; col. 5, lines 18-20, "One bit is used to indicate that this is a container record (as opposed to a data-containing record)", wherein a code point is equivalent to a header and one of the types is container records, in which case the header is a collection element header because container records contain other records, which is equivalent to a "collection" element, and the data itself is the payload);

wherein the collection element header comprises a collection element type field, wherein the collection element type field indicates the collection element fragment is a collection element fragment; (col. 5, lines 18-20, "One bit is used to indicate that this is a container record (as opposed to a data-containing record)",

and a collection element length field, wherein the collection element length field indicates the a length of the collection element payload (col. 5, lines 23-25, "For container records, the length field 203 specifies the total length of all records that the current record contains (as described above)");

Response to Arguments

7. Applicant's arguments with respect to all the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWEN LIANG whose telephone number is 571-272-4038. The examiner can normally be reached on 9:30 A.M. - 5:30 P.M. Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

20 December 2005
G.L.


Primary Examiner
Art Unit 2167